



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

July 12, 2002

MEMORANDUM

Subject: Acute Toxicity Review for EPA Reg. No.: 8383-RN
DP Barcode: D283811
Case No: 069178

To: Adam Heyward PM 34
Regulatory Management Branch II
Antimicrobials Division (7510C)

From: Robert A. Turpin, Scientist *R.T.*
Chemistry/Toxicology Team
Product Science Branch
Antimicrobials Division (7510C)

Through: Karen Hicks, Team Leader
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510C)

K. Hicks
7-16-02

Michele E. Wingfield, Chief
Product Science Branch
Antimicrobials Division (7510C)

Applicant: Sporidicin International

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Phenol	7.80
Sodium phenate	0.30
<u>Other Ingredient(s):</u>	<u>91.90</u>
Total:	100%

BACKGROUND: The applicant has submitted an application for registration of its product, Permacide Disinfectant and Sanitizer. In support of the application, the applicant has submitted toxicity studies, MRID #s 456919-02 (Acute Oral Toxicity); 456919-03 (Acute Dermal Toxicity); 456919-04 (Acute Inhalation Toxicity); 456919-05 (Primary Eye Irritation); and, 456919-06 (Primary Skin Irritation). Additionally, the applicant has submitted a Confidential Statement of Formula and Data Matrix. The Product Science Branch has performed the primary review.

RECOMMENDATIONS (PSB findings):

1. The applicant must provide to the Agency a study of Dermal Sensitization according to the guidelines of OPPTS 870.2600.
2. The applicant must change the SIGNAL WORD from CAUTION to WARNING.
3. The applicant must include acceptable language for avoiding skin contact and first aid treatment subsequent to skin contact.

The acute toxicity profile for Reg. No. 8383-RN is currently:

acute oral toxicity	IV	Acceptable
acute dermal toxicity	IV	Acceptable
acute inhalation toxicity	IV	Acceptable
primary eye irritation	II	Acceptable
primary skin irritation	III	Acceptable
dermal sensitization	No data	Unacceptable

LABELING:

The SIGNAL WORD for category II eye irritation is WARNING. The draft label displays the SIGNAL WORD as CAUTION. The draft label does not address the first aid treatment for exposure to the skin. The FIRST AID STATEMENT must include the statement:

“Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.”

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§ 81-1, 870.1100)

Product Manager: Adam Heyward
MRID No.: 456919-02

Reviewer: R. Turpin
Study Completion Date: 2/05/02
Report No.: 11540

Testing Laboratory : Product Safety Labs
Authors : George E. Moore

Quality Assurance (40 CFR §160.12): Statements provided.

Test Material: Sporidicin Concentrated Disinfectant/Sanitizer

Species: Rat

Age: 9 to 10 weeks

Weight: Males - 233-270 grams; females - 173-200 grams

Source: Ace animals, Inc.

Conclusion:

1. **LD₅₀ (mg/kg):**

Males = >5,000 mg/kg

Females = >5,000 mg/kg

Combined = >5,000 mg/kg

2. **The estimated LD₅₀ is** >5,000 mg/kg

3. **Tox. Category:** IV

Classification: Acceptable

Procedure (Deviations from §81-1): None reported.

Results:

Dosage (mg/kg)	(Number Deaths/Number Tested)		
	Males	Females	Combined
5,000 mg/kg	1/5	1/5	2/10

Observations: One male and one female died in the first two days of the test. Symptoms of toxicity prior to death included ataxia, tremors, abnormal posture and hypoactivity. Surviving animals exhibited clinical signs including tremors, abnormal posture, facial staining and hypoactivity but recovered by day 4, gaining weight by day 14.

Gross Necropsy: Examination of the two decedents revealed ocular and nasal discharge and discoloration of the intestines and/or lungs. No gross abnormalities were observed of the surviving animals.

DATA REVIEW FOR ACUTE INHALATION TOXICITY (§81-3, 870.1300)

Product Manager: Adam Heyward
MRID No.: 456919-04

Reviewer: R. Turpin
Study Completion Date: 2/5/02
Report No.: 11542

Testing Laboratory: Product safety Labs

Author: George E. Moore

Quality Assurance (40 CFR §160.12): Statements provided.

Test Material: Sporicidin Concentrated Disinfectant/Sanitizer

Concentration: 2.09 mg/L

Species: Rat

Weight: Males - 233-257 grams; Females - 175-205 grams

Age: Young adults (8-9 weeks)

Source: Ace Animals, Inc.

Summary:

1. **LC₅₀ (mg/L):**
Males = >2.09 mg/L
Females = >2.09 mg/L
Combined = >2.09 mg/L
2. The estimated LC₅₀ is >2.09 mg/L
3. MMAD: 2.5 µm
4. **Tox. Category:** IV **Classification:** Acceptable

Procedure (Deviation From §81-3): None noted.

Results:

Reported Mortality

Exposure Concentration	(NUMBER DEATHS/NUMBER TESTED)		
	Males	Females	Combined
2.09 mg/L	0/5	0/5	0/10

Chamber Atmosphere			
Dose Level	MMAD	GSD	particles <
2.09 mg/L	2.5 μm	2.03 μm	14.2
	μm	μm	

Chamber Environment	
Chamber Volume	150 L
Airflow	45.7 Lpm
Temperature	21-22 ° C
Relative Humidity	48-90%

Clinical Observations: All animals survived and gained body weight. In chamber observations included ocular and nasal discharge, irregular respiration, hunched posture, hypoactive and tremors. Post chamber exposure all animals continued to exhibit clinical signs but recovered by Day 1 and appeared active and healthy for the remainder of the 14 day observation period.

Gross Necropsy Findings: No gross abnormalities were noted for the animals when necropsied at the conclusion of the 14 day period.

DATA REVIEW FOR PRIMARY EYE IRRITATION TESTING (§81-4, 870.2400)

Product Manager: Adam Heyward

MRID No.: 456919-05

Reviewer: R. Turpin

Study Completion Date: 2/5/02

Report No.: 11543

Testing Laboratory: Product safety Labs

Author(s): George E. Moore

Quality Assurance (40 CFR §160.12): Statements provided.

Test Material: Sporidicin Concentrated Disinfectant/Sanitizer

Dosage: 0.1 ml

Species: Rabbit

Sex: 1 male, 2 females

Weight: N/A

Age: Young adult

Source: Davidson's Mill Farm

Summary:

1. **Toxicity Category:** II
2. **Classification:** Acceptable

Procedure (Deviations From §81-4): None noted.

Results:

Observations	(number "positive"/number tested)							
	Hour	Days						
	1	1	2	3	4	7	14	21
Corneal Opacity	0/3	3/3	3/3	3/3	3/3	2/3	0/3	---
Iritis	0/3	3/3	3/3	2/3	1/3	0/3	0/3	---
Conjunctivae								
Redness	3/3	3/3	3/3	3/3	3/3	3/3	0/3	---
Chemosis	3/3	3/3	3/3	3/3	3/3	0/3	0/3	---
Discharge	3/3	3/3	3/3	3/3	3/3	2/3	0/3	---

--- = no observations at this point

DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5, 870.2500)

Product Manager: Adam Heyward
MRID No.: 456919-06

Reviewer: R. Turpin
Study Completion Date: 2/5/02
Report No.: 11544

Testing Laboratory: Product safety Labs
Author: George E. Moore

Quality Assurance (40 CFR §160.12): Statements provided.

Test Material: Sporidicin Concentrated Disinfectant/Sanitizer

Dosage: 0.5 ml

Species: Rabbit

Age: Young adult

Sex: Male

Weight: N/A

Source: Davidson's Mill Farm

Summary:

1. **Toxicity Category:** III
2. **Classification:** Acceptable

Procedure (Deviations From §81-5): None noted.

Results: All animals appeared active and healthy, exhibiting no other signs of gross toxicity, adverse pharmacologic effects or abnormal behavior. In the first 48 hours all test sites exhibited very slight to moderate erythema and edema. The overall severity of irritation decreased thereafter and by Day 7 all animals were free from erythema and edema.

Special Comments: None.

ACUTE TOX ONE-LINER

1. PC CODE: 64001
2. CURRENT DATE: July 12, 2002
3. TEST MATERIAL: Sporidicin Concentrated Disinfectant/Sanitizer

Study/Species/Lab/ Study#/Date	MRID No.	Results	Tox. Cat.	Core Grade
acute oral toxicity /Rat/Product Safety Labs/11540/2-5-02	456919-02	LD ₅₀ (mg/kg) = >5,000	IV	A
acute dermal toxicity /Rat/Product Safety Labs/11541/2-5-02	456919-03	LD ₅₀ (mg/kg) = >5,000	IV	A
acute inhalation toxicity / Rat/Product Safety Labs/11542/2-5-02	456919-04	LC ₅₀ (mg/L) = >2.09	IV	A
primary eye irritation /Rabbit/Product Safety Labs/11543/2-5-02	456919-05	Moderately irritating, clearing between 10 and 14 days.	II	A
primary skin irritation / Rabbit/Product Safety Labs/11544/2-5-02	456919-06	Mild to moderately irritating, clears in 7 days	III	A
dermal sensitization /			---	

A = Acceptable
 U = Unacceptable
 S = Supplementary
 V = self-Validated